

National 4 Homework 11

All Questions are Non Calculator

1. Calculate

a) $4^2 - (-3)$

b) $4 \cdot 5 \times 100$

c) $\frac{3}{7}$ of 483

d) 25% of £328

2. The ratio of apple trees to pear trees in an orchard is 3:2

a) If there are 21 apple trees, how many pear trees are in the orchard?

b) If there are 50 pear trees, how many trees are in the orchard **altogether**?



3. Greg buys 8 bottles of juice for £4.24. How much would it cost to buy 5 bottles of the same juice?

4. Write in order from smallest to largest;

$$\frac{4}{5}, 0.008, 8\%, 0.85, 18\%.$$

5. Simplify

a) $4a + 3b - a + 13b$

b) $12x - 7 - 3x - 5$

c) $4y + 8 - 3y - 10$

d) $7 + 16w - 4 + 9w - 3$

e) $5a + 7 - 2a + 8 - 3a - 10$

f) $12q + 4p + 9q - 3p$.

6. Multiply out

a) $3(x + y)$

b) $4(2x + 3)$

c) $5(3y - 1)$

d) $10(5q - 3p)$.

7. Multiply out and simplify:

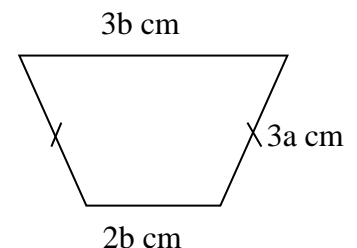
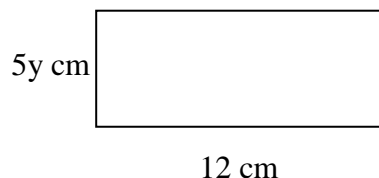
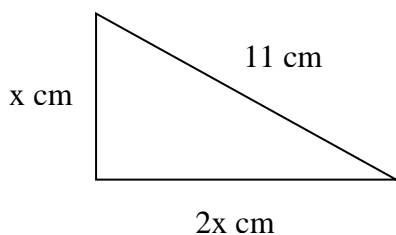
a) $2(2x + 5) - 3$

b) $4(3x - 1) - 5x$

c) $2(x - 1) + 4(x + 5)$

d) $5(3y + 2) - 2(y + 3)$.

8. Write down an expression for the perimeters of each of these shapes.



9. In California a bottle of juice costs \$3, but when you return the empty bottle you get \$2 back. What is the largest number of bottles of juice you can buy if you start with \$10? Explain your answer fully. A correct answer with no working will get no marks.